PROF. A. MILNE-EDWARDS.

IT is with sincere regret that we have to record the death, at the age of sixty-four, of Prof. Alphonse Milne-Edwards, the Director of the Paris Museum of Natural History, which took place at Paris on Saturday, April 21, after a brief illness. The late professor was of English descent, being the grandson of Mr. Bryan Edwards, M.P., a West Indian planter who settled at Bruges; and, with this ancestry, it is curious to note how extremely imperfect was his colloquial knowledge of the English language. His father, Prof. Henri Milne-Edwards, was the well-known eminent zoologist of Paris, who died in 1885; and father and son were for many years associated in zoological work.

Born in Paris in 1835, Alphonse Milne-Edwards took his medical degree in 1859, and was nominated Professor at the School of Pharmacy in 1865. In 1876 he acted as deputy for his father as Professor of Zoology at the Jardin des Plantes; in the following year he succeeded the late Prof. P. Gervais as a member of the Institute of the Paris Academy of Sciences; and in 1885 he entered the Academy of Medicine. In 1891, being already Professor of Zoology, he was appointed Director of the Paris Museum of Natural History and of the Menagerie in the Jardin des Plantes; his official title as regards the latter post being *Administrateur chargé de la Direction de la Ménagerie au Musée d'Histoire naturelle.*

Having published, in 1864, an important memoir on the anatomy and affinities of the Chevrotains, and a second, in 1866, on the osteology of the Dodo, in 1867 Milne-Edwards issued the first fasciculus of his magnificent work, entitled "Recherches Anatomiques et Paléontologiques pour servir a l'Histoire des Oiseaux Fossiles de la France," which was completed in four volumes (two of text and two of plates) in 1872. As mentioned by Prof. A. Newton, this monumental work marked an epoch in ornithology, for it showed the possibility of forming a classification of birds by means of their "long bones." Much interest was excited by the identification in this work of remains of peculiar existing African and Malagasy genera of birds in the French Tertiaries. While this work was in progress, Alphonse Milne-Edwards was associated with his father in bringing out the "Recherches pour servir à l'Histoire naturelle des Mammifères," which was commenced in 1868 and completed in 1874. A large proportion of the latter was devoted to the description of new types of mammals from Central Asia, among them being the many strange forms, like *Aeluropus*, then recently obtained by Père David in the Moupin district of Eastern Tibet. The period from 1866 to 1874 also saw the issue of "Recherches sur la Faune ornithologique éteinte des Îles Mascareignes et de Madagascar." And the late professor's interest in the Malagasy fauna was likewise shown in a paper on the embryology of the Lemurs, published in 1871, and in his contributions to Grandidier's "History of Madagascar," still in course of publication.

But it would be a mistake to suppose that the researches of Prof. Milne-Edwards were by any means restricted to mammals and birds. From an early period in his career his attention had been directed to the study of zoophytes and crustaceans; and later on he had attentively studied the animals adherent to submarine cables, which had been raised after a sojourn at the bottom of the sea. With this latter subject the study of the ocean floor was intimately connected. And in 1880 he brought before his Government the advisability of fitting out an expedition for submarine surveying, with the result that in the following year a party of savants, under his own direction, embarked on the *Travailleur* to survey the Gulf of Gascony. The results obtained were so important that the same vessel was again put at the disposal of the professor, who completed the survey of the Gulf of Gascony, and explored the sea-bottom of the Strait of Gibraltar and of a considerable portion of the Mediterranean. In 1882 the *Travailleur* undertook a surveying voyage of the Atlantic as far as the Canaries. The year following the *Talisman* took the place of the *Travailleur*, and carried Prof. Milne-Edwards and his associates to the coasts of Portugal, Morocco, and the Canary and Cape Verde Islands, and then on to the Sargasso Sea, whence it returned by way of the Azores. The results of these dredging expeditions were published under the title of "Expéditions scientifiques du *Travailleur* et du *Talisman* pendant les années 1881, 1882 et 1883."

For these deep-sea explorations, Milne-Edwards was awarded the gold medal of the Royal Geographical Society. In 1876 he was elected a Foreign Member of the Zoological Society of London, and in 1882 a Foreign Correspondent of the Geological Society. He paid several visits to England, the last on the occasion of the Zoological Congress at Cambridge in 1898. R. L.

NOTES.

THE funeral of the Duke of Argyll will take place at the family burial ground, Kilmun, on the Holy Loch, on Tuesday next, May 8.

THE annual conversazione of the Institution of Electrical Engineers will be held at the Natural History Museum, South Kensington, on Tuesday, June 26.

THE Duke of Cambridge, president of the Sanitary Institute, will occupy the chair at the Institute dinner on Friday, May 11.

THE University of Göttingen has awarded the Volbrecht prize for scientific research to Dr. Gegenbauer, professor of anatomy at Heidelberg. The prize is of the value of 12,000 marks (600*l.*)

To commemorate the foundation of the k. k. geologischen Reichsanstalt of Vienna, in 1849, a jubilee meeting will be held in the great hall of the Institute on June 9, and representatives of science or of scientific institutions are invited to be present.

THE *Botanical Gazette* records the death by drowning, in September last, of Prof. Kyokichi Yatabe, the founder of the Botanical Society of Japan.

THE annual meeting of the American Association for the Advancement of Science will be held at Columbia Universtity, New York, from June 25 to June 30.

WE learn, from the *American Naturalist*, that the herbarium and the principal part of the botanical library of Columbia University have been transferred to the New York Botanic Garden, and that, in future, the advanced work in botany of the University will be carried on in the laboratory of the Garden.

THE *British Medical Journal* states that the tenth award of the Riberi prize of 20,000 lire (800*l.*) will be made by the Royal Academy of Medicine of Turin on December 31, 1901, for the best printed or manuscript work, or the most important discovery, during the quinquennium 1897–1901, in the domain of experimental pathology, hygiene, or forensic medicine.

THE Franklin Institute has awarded John Scott medals and premiums to Mr. A. V. Groupe for his improved braiding machine, to Messrs. C. A. Bell and S. Tainter for their invention of the graphophone, and to Mr. A. M. Hopkins for his pneumatic system for preventing the bursting of water-pipes by freezing. Elliott Cresson medals have been awarded to Mr.

L. E. Levy for his acid-blast method of etching metal plates; and to Prof. W. O. Atwater and Mr. E. B. Rosa for their respiration calorimeter.

The *Daily News* states that Lieut. R. E. Peary has forwarded some interesting relics to the Royal Naval College, Greenwich. These consist of the sextant left behind in Repulse Harbour by Lieut. Beaumont in 1876, and subsequently recovered by Lieut. Peary, and the original record deposited in a cache by Sir George Nares on Norman Lockyer's Island in 1875. The great meteorite which Lieut. Peary brought back from his last Arctic expedition still remains on the Cob Dock of the Brooklyn Navy Yard. The meteorite weighs 200,000 pounds, and Lieut. Peary wishes to obtain 15,000*l.* for it.

The Trinity House steam vessel *Irene*, with the deputy master, Captain G. R. Vyvyan, on board, accompanied by a committee of the Elder Brethren and their scientific adviser, Lord Rayleigh, has proceeded to the Bristol and English Channels in order that special surveys in connection with new lighthouse works, and observations on both English and French lights from seaward, may be made.

The death is announced of Mr. G. V. Ellis, who succeeded Prof. Quain as professor of anatomy in University College, London, in 1850, an appointment which he held for twenty-seven years, resigning in 1877, when he was appointed Emeritus Professor. Mr. Ellis was co-editor with the late Dr. William Sharpey of the sixth edition of "Quain's Elements of Anatomy," published in 1856, and the author of several works for students of anatomy.

Among the items included in the Prussian Budget is a sum of 7,300,000 marks, for the purchase of lands in Berlin, on which is to be erected a building for the Academy of Sciences and the Royal Library. The value of the land is estimated at more than 11,000,000 marks, but about 3,000,000 marks is obtained by the exchange of other property, and 1,000,000 marks is to be voted next year.

A summer meeting of the Anatomical Society of Great Britain and Ireland will be held at the Owens College, Manchester, on Thursday and Friday, June 21 and 22. Opportunities will be afforded to members of seeing things of local interest during their visit to Manchester. An excursion to the Lake District will be arranged, and members who desire to join the party are requested to inform the local secretary, Dr. Peter Thompson, the Owens College, Manchester.

A committee composed of many eminent men of science in France has been formed for the purpose of obtaining funds for the erection of a modest monument at Langres in honour of Auguste Laurent, the renowned chemist. Laurent was born at La Folie, near Langres, in 1808, and in 1831 became assistant to Dumas, under whom he acquired a special knowledge of organic chemistry, and carried on his original researches on naphthalene and carbolic acid, together with their derivatives. After filling various posts, the last of which was a chemical professorship at Bordeaux, Laurent became Warden of the Mint at Paris, where he remained in intimate connection with Gerhardt until his death in 1853. Subscriptions for the proposed monument should be sent to the treasurer of the Committee, M. Caublot, 45 rue de Belleville, Paris.

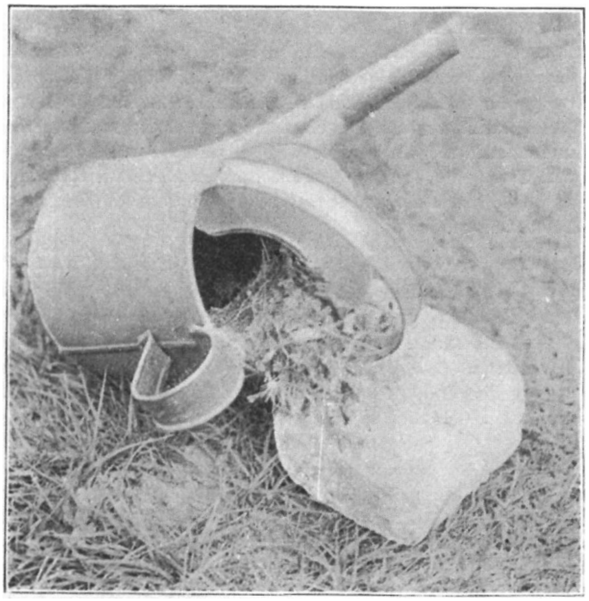
Mr. James Mansergh has been elected president of the Institution of Civil Engineers, in succession to Sir Douglas Fox. Sir William White, K.C.B., F.R.S., Mr Charles Hawksley, Mr. J. C. Hawkshaw, and Mr. F. W. Webb have been elected vice-presidents. The following awards have been made for papers read and discussed before the Institution during the past session:—A George Stephenson medal and a Telford premium to Sir Lowthian Bell, Bart., F.R.S.; Telford medals and premiums to Messrs. H. H. Dalrymple-Hay, B. M. Jenkin, F. W. Bidder and F. D. Fox; a Watt medal and a Telford premium to Mr. J. Dewrance; a Crampton Prize to Sir Charles Hartley; and Telford premiums to Messrs. C. N. Russell and R. A. Tatton. The presentation of these awards, together with those for papers which have not been subject to discussion, and will be announced later, will take place at the inaugural meeting of next session.

American ethnology has been deprived of a prominent worker by the death of Mr. Frank H. Cushing. Mr. Cushing, says the *Scientific American*, was born in 1857, at Northeast, Pa., and when he was only eighteen years of age his work was brought to the attention of the late Mr. Spencer F. Baird, who was then Secretary of the Smithsonian Institution, and in 1875 he went to Washington as an assistant in that institution. He had charge of the ethnological exhibit at the Centennial Exposition of 1876, and in 1879 he accompanied an expedition from the Smithsonian Institution to investigate the Pueblos of New Mexico, and at his request was left at the Pueblo of Zuni, where he lived almost continuously for six years. He returned to Washington in 1884 and began to work up his voluminous notes. Two years later he was made Director of the Hemenway South-western Archæological Expedition. Extensive excavations were made in South Arizona and New Mexico, and the large collection of objects of prehistoric art which he gathered is in the Peabody Museum at Cambridge, Mass. This work took up two and one-half years of his time, and then Mr. Cushing returned to the United States Bureau of Ethnology to supervise a memoir on the Zuni myths printed by the Bureau. Three years later he became director of the expedition fitted out by Mrs. Phœbe A. Hearst and the late Dr. William Pepper, conducted under the auspices of the National Museum, the Bureau of Ethnology and the University of Pennsylvania.

The motion for the second reading of the Sea Fisheries Bill in the House of Commons, on Monday, resulted in a lively discussion. The Bill prohibits the sale of flatfish below a specified size, and its rejection was moved on the grounds that it would not have the effect of preventing the destruction of immature fish, or of increasing the supply of fish. In the course of the discussion, an honourable member said that the whole of the trouble arose from the institution of a number of committees composed of farmers, lawyers, and captains of the horse, foot, and artillery, who knew little of fishing, and who ventilated strange theories and supported them with portentous and irrelevant statistics. This remark was used as an argument against the Bill, but it may also be taken to mean that if fishery matters were controlled by scientific men familiar with the natural history of the sea, and questions concerning fisheries were referred to marine biologists, recommendations would be made upon which reasonable regulations might be based. Board of Trade statistics prove that there is a large destruction of immature fish, and that the quantity of fish landed has decreased during recent years. The Government, wishing to preserve a great national industry, have put forward the present Bill, which is really the Undersized Fish Bill of last year, and has appeared under various other titles in previous years. The discussion upon the Bill was not completed when the House adjourned on Monday.

The report presented at the anniversary meeting of the Zoological Society, held on Monday, stated that the number of Fellows of the Society at the end of last year was 3246. The total income of the Society during the past year was 28,880*l.* The average annual receipts of the Society for the previous ten years have been 26,370*l.*, so that the receipts for 1899 exceeded that average by 2509*l.* The number of visitors to the Society's

Gardens in 1899 was 696,707. The number of animals now living in the Gardens is 2753, of which 821 are mammals, 1471 birds, and 461 reptiles and batrachians. Amongst the additions made during the past year, thirteen were specially commented upon as being of remarkable interest, and in most cases new to the Society's collection. Of these, by far the most noticeable objects exhibited for the first time were the pair of Grévy's zebras placed under the care of the Society by Her Majesty the Queen. These animals, which had been presented to Her Majesty by the Emperor Menelik of Abyssinia, were brought down to Zeila, on the coast of Somaliland, under the care of Captain J. L. Harrington, the British Political Agent. At Zeila they were handed over to the Society's assistant superintendant, Mr. Arthur Thomson, who had been sent there by the Council at the request of the Foreign Office on purpose to receive them, and by him they were landed safely in London on August 14 last year. The Council also called special attention to the young male giraffe, acquired in April 1899, by purchase, for the sum of 800*l*. It is believed that this animal, together with the female purchased in 1895, form the only pair of young giraffes now to be found in any of the zoological gardens in Europe. The works in connection with the new bore at the well and the new machinery for pumping were completed last year. The new water supply has been further improved by the construction of a second and larger reservoir, so that an excellent supply of water will henceforth always be available in every part of the Gardens.



MR. F. W. HASELGROVE sends us a photograph of a robin's nest in a water-can, with the bird sitting upon its eggs, now to be seen at Finchley Cemetery. Robins are well known to build their nests frequently in curious places, one of the most remarkable instances on record being that of a nest in a battered beer-can between the rails over which trucks were continually passing at Worthing railway station. Flower-pots and water-cans appear to be favourite nesting-places of the birds.

THERE are reasons for believing that the Scandinavians discovered America and settled in Massachusetts in pre-Columbian days. The evidence consists in the occurrence of certain ruins which correspond closely with ruins of the Saga-time in Iceland, but which differ from native dwellings and early European ruins on the coast; and also in the correspondence in the physical features of the Massachusetts coast with the description of the country called Vinland in Icelandic literature. This evidence has recently been brought together in an illustrated article by Miss Cornelia Horsford in *Appleton's Popular Science Monthly*.

THE recent Norwegian earthquakes are studied by Mr. J. Rekstad in a paper published in the *Bergens Museums Aarbog* (1899, No. iv.). During the four years 1895–1898, the number of recorded earthquakes is 77, the corresponding number for Great Britain being 24, and for Greece, 1652.

A SLIGHT earth-shake occurred near Manchester at about 1.17 a.m. on April 7. It was felt at Pendleton, Pendlebury, Seedley, Salford and other places in the immediate neighbourhood of the Irwell Valley fault. The small disturbed area and the rather marked intensity of the shock point to a local origin, probably connected either directly or indirectly with the extensive coal-workings of the district. On February 27, 1899, a similar earth-shake was felt at the same places (see NATURE, vol. lxi. p. 546).

WE have received a reprint of a paper, published in the *Bulletin* of the Geographical Society of Philadelphia, "On the Nicaragua Canal in its Geographical and Geological Relations," by Prof. Hugelo Heilprin. The paper, which is illustrated by maps and photographs, discusses (1) the volcanic phenomena of the region of the proposed canal; (2) an assumed inconstancy in the level of Lake Nicaragua; and (3) the deformation of the Nicaragua coast-line. After pointing out the marked deficiency of trustworthy information concerning the region, especially with regard to lake and river topography and hydrography and dynamical geology, the author concludes that "the facts that are known render doubtful, or at least open to question, the advisability of constructing, or even the practicability, of a canal such as is contemplated." . . . "It may, perhaps, be properly questioned whether, if the canal had been constructed a hundred years ago, along the site that is now being contemplated, it would be in existence to-day."

THE current number of *La Geographie* contains a suggestive paper on the variation of the limits of the Mediterranean region, by M. Gaston Bonnier. It is pointed out that attempts to define the boundary from geological considerations have proved unsatisfactory, and that the region is more clearly distinguished by its climate. This may be traced in the flora, the Mediterranean region being roughly taken in France as the region of the olive. M. Bonnier contends that it can be more closely followed, especially in certain regions, by reference to other plants, and discusses a number of interesting observations with regard to exposure and elevation.

AT the close of an address recently delivered as president of the Anthropological Society of Washington, Mr. W. J. McGee enunciated the cardinal principles of science as follows:—"The indestructibility of matter, the contribution chiefly of chemistry; the persistence of motion, the gift mainly of physics; the development of species, the offering of the biotic sciences; the uniformity of nature, the guerdon of geology and the older sciences; and the responsivity of mind, the joint gift of several sciences, though put in final form by anthropology." These principles are comprehensive enough, but they will not satisfy all students of epistemology, so much depends upon the point of view occupied.

THE manufacture of silk cord from spiders' web seems likely to attain commercial importance, for we learn through the *Board of Trade Journal* that one of the most novel exhibits in the Paris Exposition will be a complete set of bed-hangings manufactured in Madagascar from the silk obtained from the halabe, an enormous spider that is found in great numbers in certain districts of the island. The matter has been taken up by M. Nogue, the head of the Antananarivo Technical School. The results he has already achieved show that the production of spider silk should quickly become a highly important industry. Each spider yields from three to four hundred yards of silk. After the thread has been taken from the spiders they are set free, and ten days afterwards they are again ready to undergo the operation. The silk of these spiders, which is of the most extraordinary brilliant golden colour, is finer than that of the silkworm, but its tenacity is remarkable, and it can be woven without the least difficulty.

We have received from the Agricultural Department of the Economical Society of Youriev (Dorpat) a report upon the results of rainfall and temperature observations made in the Baltic Provinces of Livonia and Esthonia during 1898. This is the thirteenth year of publication; the report contains a large amount of very useful statistics, including monthly and yearly means and the number of rainy days at no less than 203 stations. The same information is also shown very clearly in a graphical manner, together with a comparison of the year's results with a ten years' average. We note that the publication of the results for the year 1899 may be expected very shortly.

The Weather Bureau of the United States has published a valuable discussion of the climate of San Francisco (*Bulletin* No. 28), by Messrs. A. G. McAdie and G. H. Willson. The work is based upon observations collected during the last thirty years, and the results are given in considerable detail on account of the important position of the town and the peculiarity of its climate. The authors state that if a native of San Francisco were asked which was the coldest month of the year, he might be unable to answer, and if asked which was the warmest, he might say November. This arises from the comparative small range of temperature; the mean annual temperature is about 56·2°. May and November have practically the same temperature; the warmest month is September, 60·9°, and the coldest January, 50·1°. The highest temperature recorded was 100°, in June, 1891, and the lowest 29°, in January, 1888. The mean of the three consecutive warmest days has never exceeded 76·3°, and the mean of the three coldest days was 40·7°. The annual rainfall is 23 inches. July and August are practically without rain, while December and January together have nearly 10 inches.

A series of Lower Silurian fossils from Baffin Land, in the region between Hudson Bay and Davis Strait, has been described and figured by Mr. Charles Schuchert (*Proc.* U.S. Nat. Museum, vol. xxii. 1900). The fossils belong to the Trenton group, and the strata rest unconformably on old crystalline rocks. The author notes the early introduction in the Baffin fauna of Upper Silurian genera of corals, such as *Halysites*. He also remarks that the corals, brachiopods, gasteropods and trilobites have a wide distribution, and are less sensitive to differing habitats than the cephalopods or lamellibranchs.

In an article on the Dwyka Coal-measures (*Trans.* S. African Phil. Soc. vol. xi.), Mr. E. J. Dunn points out that the Dwyka conglomerate, which occurs at the base of the coal-bearing series, is a most valuable horizon, and that its length of outcrop exceeds 2000 miles. This is shown on an accompanying map. Within this outcrop coal *may be present* at varying depths over an immense area, extending from the southern part of the Transvaal to Kimberley and near East London. Borings alone can decide if profitable seams occur, and if so, at what depths.

It is well known that the blood of animals that have been poisoned with carbonic oxide loses its power of absorbing oxygen. Dr. Adolfo Moutuori, writing in the *Rendiconto* of the Naples Academy, describes experiments tending to explain the fact that dogs are capable of surviving the injection into their veins of a quantity of carbonic oxide far greater than would poison them if inhaled. It is found that the poisoned blood reacquires its power of absorbing oxygen when it is brought into contact with the pulmonary tissues, but not otherwise.

The statics and dynamics of pseudospherical space in three dimensions form the subject of a memoir by Prof. D. de Francesco in the *Rendiconto* of the Naples Academy. Defining the co-ordinates of a point as the hyperbolic sines of the perpendiculars on three principal orthogonal planes of reference, the author introduces the conception of the moment of a force with regard to a point, analogous to the moment in ordinary statics, and, in addition, the new notion of the co-moment, of which an analytic expression is given. By representing forces by the hyperbolic sines of segments measured on their lines of action the equation of virtual work is established, and by applying this equation to a rigid system the author determines the six characteristics, the central axis, and the invariants. Starting from the conception of the co-moment, the problem of dynamics is treated by the method of Poinsot. Two invariants are found, and the conditions for their vanishing lead to remarkable geometrical properties, which do not exist in ordinary mechanics. The same author discusses in the *Atti dei Lincei* the kindred problem of integration of the differential equations of free motion of a rigid body in space of constant curvature.

Mr. J. E. Griffith, of Bangor, author of the "Flora of Carnarvonshire and Anglesey," proposes to publish a series of photographic reproductions of the cromlechs of these two counties of Wales. The series will contain forty-three photographs of thirty-six different cromlechs.

A rumoured project of reclaiming Wicken Fen in Cambridgeshire, forming the subject of a recent leader in the *Standard*, once more raises the question as to the desirability of acquiring by public subscription this last remaining habitat of the old fauna and flora of the Fen district, and thus saving them from extinction. Such a project was suggested some time ago by Mr. Carrington, the editor of *Science Gossip*, and it is much to be hoped that a movement may be set on foot for the purpose before it is too late.

We have received No. 3 (vol. i.), for April, of *Climate*, "a Quarterly Journal of Health and Travel," edited by Dr. C. F. Harford-Battersby. The periodical is the organ of the Travellers' Health Bureau, the object of which is to supply to inquirers information of every kind connected with the health and comfort of travellers and of residents in unhealthy climates. Among the original articles in the number before us is a very interesting one on "Gardening in West Africa," by Miss Kingsley, and a *résumé* of the facts at present ascertained connecting malarial fever with the parasite of the mosquito. A short paper on "European Children in Tropical Climates," by Dr. G. D. McReddie, will be read with interest by many.

A "FLORA OF BOURNEMOUTH" is announced for early publication by the Rev. E. F. Linton, of Bournemouth (subscription price, 7*s.* 6*d.*). The area taken is a radius of twelve miles, and includes portions of the counties of Hants and Dorset, with the Isle of Wight. The total number of flowering plants and Pteridophytes is stated as 1137.

In the *Naturwissenschaftliche Wochenschrift* for April 15, Prof. M. Möbius gives an interesting account of pigments in the vegetable kingdom. Commencing with the colouring matters of fungi and lichens, he proceeds to those in the various groups of Algæ, and then to the pigments of Muscineæ, Pteridophytes, and Phanerogams, contained in the stem, root, leaves, flowers, and fruits. He regards chlorophyll and hæmoglobin as antagonistic substances, the one characteristic of the vegetable, the other of the animal kingdom.

TO the *Sitzungsberichte* of the Berlin Academy for March 15, Dr. K. von Möbius, the director of the Zoological Museum, communicates a suggestive paper on our perception of the æsthetic proportions of various mammals.

THE April number of the *Journal of Anatomy and Physiology* contains the full text of the paper read by Dr. Albert Gray at the last meeting of the British Association on Helmholtz's theory of hearing. The author proposes a modification of the theory of the German investigator, according to which a remarkable analogy between the senses of hearing and touch is shown to exist.

IN the last issue of the *Transactions* of the South African Philosophical Society, Dr. R. Marloth gives the results of his investigations as to the mode of growth of the barnacle infesting the Southern Bight Whale. Were it not for some special provision, the growth of the epidermis beneath, coupled with the wearing away of the outer layer, would soon cause the parasite to be shed, and, as a matter of fact, this actually takes place with the dead shells. The living barnacle cannot, however, be discarded in this manner, since it dissolves the part of the epidermis with which its skin is in contact at the same rate at which fresh epidermal tissue is formed below. Consequently the layer of epidermis between the barnacle and the true skin never varies in thickness, and the parasite accordingly retains its position, the shell disintegrating at the apex at the rate at which it grows at the base.

MM. GAUTHIER VILLARS, Paris, have published the third revised edition of the "Traité élémentaire d'Electricité avec les principales Applications," by M. R. Colson.

MR. FELIX L. DAMES, Berlin, has issued a catalogue of books and papers on astronomy, geodesy, meteorology and related sciences, which he has acquired from the library of the late Dr. H. Romberg, and offers for sale.

THE seventh edition of the late Prof. Milnes Marshall's well-known and practical manual on "The Frog: an Introduction to Anatomy, Histology, and Embryology," edited by Dr. G. Herbert Fowler, has been published by Mr. David Nutt. The chief addition consists of a new series of woodcuts in illustration of the development and metamorphosis of the frog.

THE "Handbook of Jamaica," compiled by Mr. T. L. Roxburgh and Mr. J. C. Ford, and published by Mr. Edward Stanford, is filled with historical, statistical and general information concerning the island. We notice that the magnetic declination, which was 6° 30′ E. at the end of last century, and has been steadily decreasing since then, is now only 1° 24′ E., and in 1910 its value will be zero.

IN the course of a few weeks, Mr. Gustav Fischer, Jena, will commence the publication of "Aus den Tiefen des Weltmeeres," an elaborate work in which Prof. Carl Chun will describe and illustrate the German deep-sea expedition to Antarctic waters. The work will be published in twelve parts, the first of which will appear during this month and the last in November.

A SIXTH edition, revised and enlarged, of "A Text-book of Assaying," by C. and J. J. Beringer, has just been published by Messrs. Charles Griffin and Co. Mr. J. J. Beringer is responsible for the revision of this handy book for assayers; and he remarks in the preface: "The principal changes in this edition are additions to the articles on gold, cyanides and nickel, and a much enlarged index. The additional matter covers more than forty pages."

SCIENTIFIC students and investigators in Melbourne should be grateful to Mr. T. S. Hall for the "Catalogue of the Scientific and Technical Periodical Literature in the Libraries in Melbourne," which he has prepared. Besides periodicals, the list includes reports of scientific societies, as well as Government reports and Parliamentary papers of scientific import. The catalogue will be a very useful guide to scientific literature accessible in Melbourne and its suburbs.

THE sixteenth part of Mr. Oswin A. J. Lee's fine work, "Among British Birds in their Nesting Haunts, illustrated by the Camera," has just been published by Mr. David Douglas, Edinburgh. The birds illustrated and described are the black-cap, bullfinch, short-eared owl, yellow wagtail, stock dove, pintail, wryneck, and lesser whitethroat. The present part completes the fourth volume, and it is hoped that the whole work will be finished in the course of a few months.

AT the meeting of the Chemical Society on June 1, 1899, Prof. Sydney Young, F.R.S., described a series of tests made by him to determine the relative efficiency of various forms of still-heads for fractional distillation. The design of several new still-heads, superior in many respects to those in common use, was an outcome of the investigation; and chemists will be glad to know that Messrs. J. J. Griffin and Sons have now placed these improved forms upon the market.

THE additions to the Zoological Society's Gardens during the past week include a Mozambique Monkey (*Cercopithecus pygerythrus*, ♀) from Uganda, presented by Lady Ashburnham; two Leopards (*Felis pardus*, ♂ ♀) from India, presented by Mrs. C. Simpson; a Tawny Owl (*Syrnium aluco*) from Scotland, presented by Mrs. C. M. Blackwood; six Common Vipers (*Vipera berus*) from Dorsetshire, presented by Mr. A. Old; nine Natterjack Toads (*Bufo calamita*) from Norfolk, presented by Mr. J. B. Thornhill; a Sykes's Monkey (*Cercopithecus albigularis*, ♀), a Flap-necked Chameleon (*Chamaeleon dilepis*) from East Africa, a Cactus Conure (*Conurus cactorum*) from Bahia, deposited; two Gold Pheasants (*Thaumalea picta*, 2 ♀), two Silver Pheasants (*Euplocamus nycthemerus*, 2 ♀), two Cabot's Horned Tragopans (*Ceriornis caboti*, ♂ ♀) from China, two Germain's Peacock Pheasants (*Polyplectron germaini*, ♂ ♀) from Cochin China, two Japanese Pheasants (*Phasianus versicolor*, ♂ ♀), two Sœmmerring's Pheasants (*Phasianus soemmerringi*, ♂ ♀) from Japan, three White-backed Trumpeters (*Psophia leucoptera*) from the Upper Amazons, four Wonga-Wonga Pigeons (*Leucosarcia picata*) from New South Wales, a Musky Lorikeet (*Glossopsittacus concinnus*) from Australia, three Blue-crowned Hanging Parrakeets (*Loriculus galgulus*) from Malacca, an Ural Owl (*Syrnium uralense*), North-east European; a Great Wallaroo (*Macropus robustus*, ♂) from South Australia, a Barbary Wild Sheep (*Ovis tragelaphus*, ♂) from North Africa, purchased; a Yak (*Poephagus grunniens*, ♂), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

NEW VARIABLE IN TAURUS.—In the *Astronomische Nachrichten* (Bd. 152, No. 3635) M. W. Ceraski, of Moscow, announces the discovery of another new variable by Madame Ceraski during her examination of the plates taken by M. S. Blajko. The star's position is:—

R.A.				Decl.			
h.	m.	s.		°	′	″	
5	33	17·33	...	+26	18	58·3	(1900)
5	30	29·56	...	+26	17	7·9	(1855)

The star is not found in the B.D. At its maximum it is of 9·0–9·5 mag.; at minimum, about 12 mag. or less. On 1900 March 29, it was at the limit of visibility in a telescope of 4·5 inches aperture.